

WHAT IS CLAIMED IS:

1. An apparatus for generating a reverberation sound from an input sound with use of an impulse response based on an instruction, the apparatus comprising:

    a first storage section that stores first impulse response data representative of a first impulse response;

    a second storage section that stores second impulse response data representative of a second impulse response which is different from the first impulse response represented by the first impulse response data;

    a new data creating section that operates based on the first impulse response data and the second impulse response data for creating new impulse response data representative of a new impulse response in accordance with the instruction; and

    a reverberation sound generating section that generates reverberation sound data representative of the reverberation sound by filtering input sound data representative of the input sound with use of the new impulse response data, such that the generated reverberation sound is featured by the new impulse response.

2. The apparatus according to claim 1, wherein the second storage section stores the second impulse response data representative of the second impulse response which has a

reverberation time different from that of the first impulse response represented by the first impulse response data, and the new data creating section creates the new impulse response data representative of the new impulse response having a reverberation time which is derived from the reverberation times of the first impulse response and the second impulse response in accordance with the instruction.

3. The apparatus according to claim 1, wherein the second storage section stores the second impulse response data representative of the second impulse response which has a frequency characteristic different from that of the first impulse response represented by the first impulse response data, and the new data creating section creates the new impulse response data representative of the new impulse response having a frequency characteristic which is derived from the frequency characteristics of the first impulse response and the second impulse response in accordance with the instruction.

4. The apparatus according to claim 1, wherein the new data creating section creates the new impulse response data by linearly combining the first impulse response data and the second impulse response data with each other in accordance with the instruction.

5. The apparatus according to claim 1, wherein the second

storage section stores the second impulse response data which is obtained by manipulating the first impulse response data.

6. The apparatus according to claim 1, wherein the new data creating section divides the first impulse response data into a sequence of first blocks along a time axis, divides the second impulse response data into a sequence of second blocks along the time axis, and creates a sequence of blocks of the new impulse response data arranged along the time axis in correspondence to the sequence of the first blocks of the first impulse response data and the sequence of the second blocks of the second impulse response data, and

wherein the reverberation sound generating section divides the input sound data into a sequence of blocks along the time axis in correspondence to the sequence of the blocks of the new impulse response data, then filters each block of the input sound data with use of each block of the new impulse response data, and sums the filtered results altogether to generate the reverberation sound data.

7. The apparatus according to claim 1, wherein the new data creating section separates the first impulse response data into a plurality of frequency components, also separates the second impulse response data into a plurality

of frequency components, then executes a computation for each of the plurality of the frequency components between the first impulse response data and the second impulse response data according to the instruction, and sums results of the computation altogether to generate the new impulse response data.

8. A program executable by a computer for generating a reverberation sound from an input sound with use of an impulse response based on an instruction, the program comprising:

a first providing step of providing first impulse response data representative of a first impulse response;

a second providing step of providing second impulse response data representative of a second impulse response which is different from the first impulse response represented by the first impulse response data;

a new data creating step of creating new impulse response data representative of a new impulse response based on the first impulse response data and the second impulse response data in accordance with the instruction; and

a reverberation sound generating step of generating reverberation sound data representative of the reverberation sound by filtering input sound data representative of the input sound with use of the new impulse response data, such that the generated

reverberation sound is featured by the new impulse response.

9. The program according to claim 8, wherein the second providing step provides the second impulse response data representative of the second impulse response which has a reverberation time different from that of the first impulse response represented by the first impulse response data, and the new data creating step creates the new impulse response data representative of the new impulse response having a reverberation time which is derived from the reverberation times of the first impulse response and the second impulse response in accordance with the instruction.

10. The program according to claim 8, wherein the second providing step provides the second impulse response data representative of the second impulse response which has a frequency characteristic different from that of the first impulse response represented by the first impulse response data, and the new data creating step creates the new impulse response data representative of the new impulse response having a frequency characteristic which is derived from the frequency characteristics of the first impulse response and the second impulse response in accordance with the instruction.

11. The program according to claim 8, wherein the new data

creating step creates the new impulse response data by linearly combining the first impulse response data and the second impulse response data with each other in accordance with the instruction.

12. The program according to claim 8, wherein the second providing step provides the second impulse response data which is obtained by manipulating the first impulse response data.

13. The program according to claim 8, wherein the new data creating step divides the first impulse response data into a sequence of first blocks along a time axis, divides the second impulse response data into a sequence of second blocks along the time axis, and creates a sequence of blocks of the new impulse response data arranged along the time axis in correspondence to the sequence of the first blocks of the first impulse response data and the sequence of the second blocks of the second impulse response data, and

wherein the reverberation sound generating step divides the input sound data into a sequence of blocks along the time axis in correspondence to the sequence of the blocks of the new impulse response data, then filters each block of the input sound data with use of each block of the new impulse response data, and sums the filtered results altogether to generate the reverberation sound

data.

14. The program according to claim 8, wherein the new data creating step separates the first impulse response data into a plurality of frequency components, also separates the second impulse response data into a plurality of frequency components, then executes a computation for each of the plurality of the frequency components between the first impulse response data and the second impulse response data according to the instruction, and sums results of the computation altogether to generate the new impulse response data.

15. A method of generating a reverberation sound from an input sound with use of an impulse response based on an instruction, the method comprising the steps of:

providing first impulse response data representative of a first impulse response;

providing second impulse response data representative of a second impulse response which is different from the first impulse response represented by the first impulse response data;

creating new impulse response data representative of a new impulse response based on the first impulse response data and the second impulse response data in accordance with the instruction; and

generating reverberation sound data representative of

the reverberation sound by filtering input sound data representative of the input sound with use of the new impulse response data, such that the generated reverberation sound is featured by the new impulse response.